SYSTEM AND METHOD FOR EVALUATING EFFICIENCY LOSSES FOR TURBINE COMPONENTS

ABSTRACT OF THE DISCLOSURE

[0036] A method and system of evaluating a turbine component comprises obtaining data relating to respective surface conditions at a plurality of different surface locations of the turbine component and calculating the total profile efficiency loss for the turbine component based on the data. Calculating the total profile efficiency of the turbine component may include calculating the local profile efficiency loss percentage for each of the surface conditions at the different surface locations (and/or sub-areas of the different surface locations) and calculating an average of the local profile efficiency loss percentages, each of the local efficiency loss percentages being weighted by respective predetermined weight factors. The turbine component may be a nozzle or a bucket and each of the turbine component's surface locations may be an admission suction surface, an admission pressure surface, a discharge suction surface or a discharge pressure surface.